

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY


(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 26 MAY 2005

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Applicant's or agent's file reference B03/093PC/MG		FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/EP2004/050556		International filing date (day/month/year) 16.04.2004		Priority date (day/month/year) 23.04.2003
International Patent Classification (IPC) or national classification and IPC A47J31/32				
Applicant WITTENBORG AS et al.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 2 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand 02.11.2004		Date of completion of this report 24.05.2005		
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer Fritsch, K Telephone No. +49 89 2399-7318		



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2004/050556

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1, 3-6	as originally filed
2	received on 23.09.2004 with letter of 20.09.2004

Claims, Numbers

1-4	received on 23.09.2004 with letter of 20.09.2004
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Drawings, Sheets

1/1	as originally filed
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- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2004/050556

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-4
	No: Claims	
Inventive step (IS)	Yes: Claims	1-4
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-4
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Reference is made to the following document:
D1 (closest prior art): US-A-3 478 670
2. The object of the present invention is to provide a beverage brewing device which is simple and rational in the operation and construction thereof owing to various functions being combined and integrated in view of reducing minimizing the number of moving parts of the device to a minimum.

The subject-matter of document D1 discloses (cf. Fig. 1 - 4) a beverage brewing device showing all the features of the preamble of independent claim 1 of the present invention.

The characterising features of independent claim 1 are neither known nor rendered obvious from the available prior art documents.

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110 The two conduits are selectively opened by means of a three-way flow-diverting valve installed in the conduit that connects the air pump with the brewing cylinder.

5 The opening that establishes a communication between the filling hopper and the brewing cylinder is closable by a valve performing a reciprocating motion as driven by a specially provided motor. The solution described in this Japanese patent turns however out as being rather complicated from a structural point of view, as well as scarcely reliable from an functional point of view; it in fact calls for a number of different
10 operating parts to be used, which imply quite high costs due to both the components and the assembly thereof.

US-A-3,478,670 discloses another coffee brewer provided with a movable brew cylinder and a plurality of separate air circuits with respective valves. Such a solution suffers the same drawbacks of the
15 already cited Japanese patent.

It therefore is a main object of the present invention to provide a device for brewing beverages, which is particularly simple and rational in the operation and construction thereof owing to various functions being
20 combined and integrated in view of reducing minimizing the number of moving parts of the device to a minimum, i.e. minimizing the number of those components which require being moved.

Within this general object, it is a purpose of the present invention to provide a beverage brewing device, which is capable of ensuring that the
25 brewing chamber is duly flushed and washed during each operating cycle of the device.

Another purpose yet of the present invention is to provide a brewing device, whose component parts are provided so as to be easily and conveniently disassembled and removed to maintenance and cleaning
30 purposes.

According to the present invention, these aims are reached in a brewing device incorporating the characteristics as recited in the appended claims.

CLAIMS

23. 09. 2004

(110)

1. Beverage brewing device, in particular for brewing hot beverages such as coffee, tea, roasted-barley coffee, camomile tea and similar
5 infusions, comprising substantially a brewing chamber (1), in which the substances needed to prepare the infusion are introduced through a mixing hopper (2), which is situated above said brewing chamber, and are mixed by compressed air being admitted thereinto as supplied by an air
compression means (7), the device further comprising a removable filter
10 (10) that closes the brewing chamber on the lower side thereof, **characterized in that** the opening (5) connecting the mixing hopper (2) with the brewing chamber (1) is closed by an automatic valve (6), which is actuated by the compressed air supplied by said air compression means (7) via a delivery conduit (8), which extends into the brewing chamber (1)
15 to debouch below said automatic valve (6).

2. Beverage brewing device according to claim 1, **characterized in that** the automatic valve (6) is in an umbrella-like shape so as to be able to diffuse the water against the walls of the brewing chamber, thereby enabling them to be flushed clean.

20 3. Beverage brewing device according to any of the preceding claims or combination thereof, **characterized in that** said automatic valve (6) is arranged with its axis extending vertically and is so shaped and provided with sealing means (11) as to be able to tightly close the opening (5) when compressed air is being delivered.

25 4. Beverage brewing device according to any of the preceding claims or combination thereof, **characterized in that** above said valve (6), and associated to the hopper (2), however separated therefrom, there is provided an air venting conduit (22).